

## ABSTRACT

A virtual machine system which forms a hot standby configuration in a single computer system and effectively controls plural operating systems and application programs, and a method of allocating resources in the virtual machine system. Plural operating systems are initiated with a small amount of main storage allocated to the individual operating systems, whereby the fixed amount of main storage allocated is reduced. When an application program is executed, a request to extend a resource is issued to a virtual machine monitor to obtain the resource, whereby an operating system newly allocates the resource to execute the application program. Where a hot standby system is built using the virtual machine system, resources are reused by reallocating resources of the active operating system to a standby operating system.